Carswell/Plant 4

FINAL
RCRA FACILITY INVESTIGATION REPORT
SWMUs 19, 20, and 21 / Fire Training Area No. 2

Restoration Advisory Board Executive Summary #40 ● August 21, 2003

INTRODUCTION

Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth JRB), formerly Carswell Air Force Base, is in the process of planning and conducting activities for the identification, remediation, and closure of contaminated sites at the base through the Installation Restoration Program (IRP). The IRP is the primary mechanism of the Department of Defense for environmental response actions on U.S. Air Force installations. IRP activities are governed by provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and other applicable federal and state regulations. The IRP at NAS Fort Worth JRB is being conducted through the combined efforts of the Air Force Center for Environmental Excellence (AFCEE) and the Air Force Real Property Agency (AFRPA).

PROJECT BACKGROUND

A RCRA Facility Investigation (RFI) was conducted at solid waste management units (SWMU) 19 (former Fire Training Area No. 2), 20 (waste oil storage tank), and 21 (waste fuel storage tank). The locations of SWMUs 19, 20, and 21 are presented in Figure 1. SWMU 19 consisted of a circular fire ring with soil berms around its perimeter. The area within the berms contained steel dumpsters that were arranged in the shape of an aircraft. Periodically, the dumpsters were filled with waste oil and waste fuel and ignited during fire training exercises to simulate aircraft fires. Fire training activities at SWMUs 19, 20, and 21 were conducted from 1963 to 1991. The RFI of SWMUs 19, 20, and 21 was required by the base's RCRA hazardous waste permit (HW-50289).

RCRA FACILITY INVESTIGATION STRATEGY

The purpose of the RFI was to obtain closure of the sites under the TCEQ Risk Reduction Standard (RRS) program. The RFI sampling plan was designed to determine if a release from SWMUs 19, 20, and 21 had occurred. Essential information consisting of soil lithology, the nature of wastes encountered, and an assessment of potential contaminant impacts on the quality of soil and groundwater within and around SWMUs 19, 20, and 21 was obtained to determine if the site presented a threat to human health or the environment.

RFI activities at SWMUs 19, 20, and 21 were initiated in May 2000 and were concluded in January 2003. These activities included 2 geophysical surveys, 4 exploratory excavations, and the installation of 41 soil borings, 7 monitoring wells, and 19 piezometers. A total of 203 soil and 51 groundwater samples were collected for laboratory analysis.

Upon review and evaluation of the data, evidence of a release of metals, volatile organic compounds, and semivolatile organic compounds into soil was found. However, all contaminants of concern for soil were delineated, and concentrations were shown to be protective of human health and the environment.

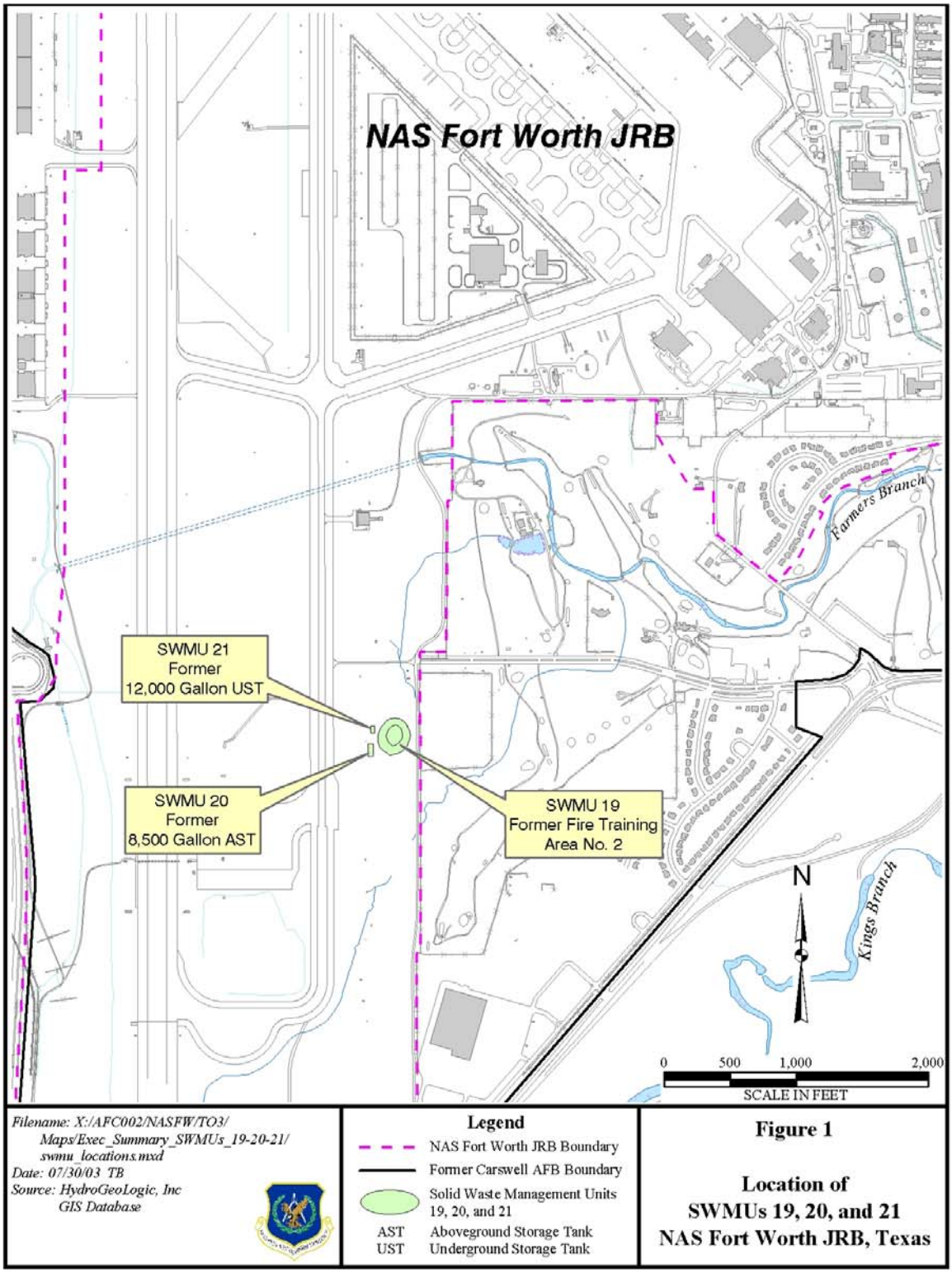
In addition, evidence of a release of petroleum-related compounds into groundwater at SWMU 19 was also identified. Free-phase petroleum product was removed from a monitoring well located in the center of SWMU 19. Other dissolved petroleum-related compounds were delineated in groundwater. The remaining concentrations of petroleum-related compounds in groundwater are at or below RRS 2 concentrations, and these compounds were delineated to RRS 1 levels. Therefore, petroleum-related compounds present in groundwater at SWMU 19 do not appear to pose a threat to human health and the environment.

Analytical results from monitoring well data also suggest that SWMU 21 and possibly SWMU 19 may have been contributing sources of tetrachloroethene (PCE) and trichloroethene (TCE) to the basewide TCE plume, which affects a large area of NAS Fort Worth JRB groundwater. However, as PCE, TCE, and other related chlorinated solvents detected in groundwater at SWMUs 19, 20, and 21 are migrating into the downgradient permeable reactive barrier designed to remediate chlorinated solvents, the potential risk to human health and the environment has been mitigated.

Consequently, the Final RFI Report recommended closure of soil under RRS 2 for SWMUs 19, 20, and 21. The RFI Report was submitted to the TCEQ for review and approval in June 2003.

For More Information:

If you would like more information, please see our website at http://www.afcee.brooks.af.mil/er/carswell/nasfw/ or contact Michael Dodyk, HQ AFCEE, at (817) 782-7169 or via e-mail at Mike.Dodyk@carswell.af.mil.



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Date: 07/30/03 TB
Source: HydroGeoLogic, Inc GIS Database

Legend

- NAS Fort Worth JRB Boundary
- Former Carswell AFB Boundary
- Solid Waste Management Units 19, 20, and 21
- AST Aboveground Storage Tank
- UST Underground Storage Tank

Figure 1

Location of SWMUs 19, 20, and 21 NAS Fort Worth JRB, Texas